

**CLAIM:**

1. A financial simulation computer program product for creating a project preparation, negotiating, and testing environment using standard project finance tools, comprising:

a computer usable medium having computer-readable program code embodied in a medium for generating financial statements, financial data, charts, graphs and reports using the standard project finance tools, the product having

means for providing limited recourse including debt service reserve accounts, stand-by loans and risk-sharing with suppliers and off-takers;

means for allowing automatically generated or manual entry of and editing of capital expenditure time series for multiple contracts in multiple capital expenditure categories;

means for selecting a desired financing time horizon for each loan;

means for setting for each loan a percentage of a capital expenditure time series to be financed;

means for automatically generating a loan disbursement time series; and

means for generating a loan disbursement times series independent of changes in capital expenditures and exchange rates based upon an earlier automatically generated loan disbursement time series.

2. The computer program product as claimed in Claim 1, wherein the capital expenditure categories which serve as basis for loan financing comprise a first category which includes total capital expenditure, site, buildings, equipment and pre-production costs; a second category which includes total expenditure in a category element or sub-elements which include imports, local content, customs, imports and customs, local content and customs, and imports and

customs; a third category which is an individual contract; and a fourth category which includes a total expenditure of a contract or sub-elements thereof, including imports, local content, customs, imports and customs, local content and customs, and imports and local content.

3. The computer program product as claimed in Claim 1, wherein means is provided for ensuring that, in any given month, more than that month's loan utilization cannot be repaid.

4. The computer program product as claimed in Claim 1, wherein means is provided for automatically generating project currency exchange rate time series to allow for simulating currency shocks or cyclical patterns and manually editing the time series to give access to all project currencies.

5. The computer program product as claimed in Claim 4, wherein said access means includes creation of a link between a user-selected currency and currency-convertible items.

6. The computer program product as claimed in Claim 5, wherein said access means includes searching, upon a user-initiated deletion of a currency, all individual records for the currency's name and, upon finding the name in at least one record, prevents deletion of the currency.

7. The computer program product as claimed in Claim 1, wherein means is provided for automatically building inventories.

8. The computer program product as claimed in Claim 7, wherein said inventory building means includes the step of, upon entry of the number of units held as minimum stock and delivery time, buying minimum stock on time for delivery at start-up to begin production.

9. The computer program product as claimed in Claim 8, wherein said inventory building means values stock with a LIFO-method.

10. The computer program product as claimed in Claim 1, wherein means is provided for allowing cash flow risks to be shared with a supplier.

11. The computer program product as claimed in Claim 10, wherein said cash flow risks sharing means includes, upon selection of a sales contract and inputting of a percentage to be applied to a sales price of the selected sales contract to obtain input price, establishing a link between the sales contract and the input price and entering the name of the selected sales contract into a variable input record to allow the input price in numéraire units to vary subject to a minimum price time series with the sales price time series and an associated exchange rate time series.

12. The computer program product as claimed in Claim 1, wherein means is provided to allow inputting of input-output coefficients and to select a time needed to produce one output unit per product.

13. The computer program product as claimed in Claim 12, wherein said time selection means includes accounting for the number of units produced, prices work-in-process at factor costs, and accounting for changes in input costs.

14. The computer program product as claimed in Claim 13, wherein the work-in-process is priced at historical cost at time of procurement of input factors plus share of fixed operating costs during production time.

15. The computer program product as claimed in Claim 1, wherein means is provided for creating a cash flow, an income statement and a balance sheet which will account for output variations including maintenance shutdowns.

16. The computer program product as claimed in Claim 15, wherein said balance sheet creating means includes means for creating a finished goods balance sheet position based upon an average number of inventory cycle days, whereby a value of finished goods is generatable at any time during a project lifetime.

17. The computer program product as claimed in Claim 1, wherein means is provided for allowing sale of output or portions thereof directly to an end user, through intermediaries (off-takers) or on a cost-plus basis taking sales expenses into account.

18. The computer program product as claimed in Claim 17, wherein said cost-plus sale allowing means includes providing a list of cost bases comprising total operating costs, variable costs, fixed operating costs, variable plus fixed operating costs, and total operating costs plus depreciation.

19. The computer program product as claimed in Claim 18, wherein said sale allowing means further includes the step, upon selection of a mark-up basis, of establishing a link between a mark-up sales price and a selected cost basis, whereby any changes in the selected cost basis are automatically associated with the mark-up price.

20. The computer program product as claimed in Claim 1, wherein means is provided to check dynamic impact of changes in key variables on limited recourse reserve availability.

21. The computer program product as claimed in Claim 20, wherein said dynamic impact checking means allows access to at least one of balance of aggregate debt service reserve accounts, stand-by loans, total unconditional (limited recourse) reserves and total unused (limited recourse) reserves, and to graphically illustrated time series.

22. The computer program product as claimed in Claim 20, wherein said dynamic impact checking means allows, with regard to a selected product, access to at least one of deferment credits variable costs, unused variable cost recourse, deferment credits off-take contracts, unused off-take credit recourse and total unused product recourse.

23. The computer program product as claimed in Claim 1, further comprising means for providing a monthly equity subscription plan by one of accessing total time series for monthly entries and month-to-month.

24. The computer program product as claimed in Claim 1, wherein said entry allowance means includes inputting multiple variables per product.

25. The computer program product as claimed in Claim 1, wherein said entry allowance means includes means for automatically break-even testing a sales contract.

26. The computer program product as claimed in Claim 1, wherein the loan disbursement time series automatic generating means includes generating in any project currency and permitting interest capitalization.

27. The computer program product as claimed in Claim 1, further comprising means for one of automatically generating loan repayment time series in equal installments and at the same time permitting use of free cash flow to prepay loans and automatically generating loan repayment time series as an annuity.

28. The computer program product as claimed in Claim 3, wherein said ensuring means further manually edits an automatically generated loan disbursement time series or manually enters a loan disbursement time series to allow manual design of individual repayment amounts for each installment.

29. The computer program product as claimed in Claim 1, wherein means is provided for automatically generating debt service reserves accounts including monthly step ups.

30. The computer program product as claimed in Claim 1, wherein said access means includes searching upon a user-initialized deletion of a capital expenditure contract all individual loan records for a contract's name and, upon finding the name in at least one record, prevents the deletion of the named contract.

31. The computer program product as claimed in Claim 1, wherein means is provided for automatically depreciating capital expenditure for buildings, equipment, pre-production costs and capitalized interest during construction over a number of years inputted by a product user.

32. The computer program product as claimed in Claim 1, wherein means is provided for automatically generating reinvestment time series for capital expenditure categories buildings and equipment to allow a product user to input reinvestment amounts, start and end of reinvestment period and number of months' between reinvestments.

33. The computer program product as claimed in Claim 1, wherein means is provided for automatically generating maintenance time series for capital expenditure categories site, buildings and equipment.

34. The computer product program as claimed in Claim 5, wherein means is provided for calculating foreign exchange gains and losses from exchange rate changes of any project currencies.

35. The computer program product as claimed in Claim 1, wherein means is provided for user inputting down payment for variable input factor payments and time between creation of payment obligation and actual payment.

36. The computer program product as claimed in Claim 35, wherein said user input means allow calculation of variable input factor related cash payments, impact on cash account and accounts payable.

37. The computer program product as claimed in Claim 11, wherein means is provided for deferral credit of input payments subject to a trigger price and a maximum loan deferral amount not yet used, and paying interest on utilization of a deferral credit, and deferring interest payment if cash flow is unavailable.

38. The computer program product as claimed in Claim 1, wherein means is provided for automatically generating an output time series using percentage of capacity used and including automatic creation of linear, steep and flat learning curves and allowing for manually editing time series of percentage of capacity used including the creation of maintenance shutdowns.

39. The computer program product as claimed in Claim 1, wherein said entry allowance means includes means for inputting different types of sales contracts per product.

40. The computer program product as claimed in Claim 17, wherein said direct sale or sale through intermediaries allows automatic generation of the sales price time series including cyclical patterns and trends and allows the manual editing of the sales price time series.

41. The computer program product as claimed in Claim 40, wherein means is provided for cash flow risk sharing with intermediaries (off-takers) through deferral credits for off-takers' fees subject to a trigger price, a maximum deferral credit amount not yet reached and paying interest on utilization of a deferral credit, and deferring interest payment if cash flow is unavailable.

42. The computer program product as claimed in Claim 17, wherein means is provided for allowing user input of time between creation of sales payment obligation and receipt of payment.

43. The computer program product as claimed in Claim 42, wherein said time between creation of payment obligation and receipt of payment includes calculation of balance sheet position receivables.

44. The computer program product as claimed in Claim 1, wherein means is provided for searching, upon a user initialized deletion of a direct sale or off-take contract, all individual records of variable input factors using a percentage of sales price for input factor pricing and, finding the direct sale or off-take contract's name in one record, prevents the deletion of the direct sale or off-take contract.

45. The computer program product as claimed in Claim 23, wherein, with accessing of total time series month-to-month, means is provided to inform a user after each monthly entry with respect to resulting equity ratio, required and actual balance of aggregate debt service reserve account, cash flow after aggregate debt service reserve account and additional shareholder investments in the respective month.

46. The computer program product as claimed in Claim 1, wherein means is provided for generating automatically and editing manually property tax and corporate tax rate time series including tax holidays and, with respect to corporate tax, differentiating tax paid on retained and disbursed income and calculating the corporate tax payable allowing the carry forward of losses.

47. The computer program product as claimed in Claim 1, wherein means is provided for automatically performing sensitivity testing on capital expenditure contracts, exchange rates, input costs, interest rates and start up delays providing also information on necessary additional shareholder investments.

48. The computer program product as claimed in Claim 1, wherein means is provided to save scenarios as new case files.

49. Method for implementing a machine-readable financial simulation computer program, comprising:

installing the program which is contained as computer readable code on a computer usable medium in a computer;

permitting entry of data representative of multiple contracts and multiple capital expenditure categories;

selecting a desired loan financing time horizon;

setting a percentage of a capital expenditure time series to be financed; and

generating a loan disbursement time series and disbursement schedule independent of changes in capital expenditures and in exchange rates.

50. The method as claimed in Claim 49, wherein the capital expenditure categories that can serve as a basis for loan financing comprise a first category which includes total capital expenditure, site, buildings, equipment and pre-production costs; a second category which includes total expenditure in a category element or sub-elements which include imports, local content, customs, imports and customs, local content and customs, and imports and customs; a third category which is an individual contract; and a fourth category which includes a total expenditure of a contract or sub-elements thereof, including imports, local content, customs, imports and customs, local content and customs, and imports and local content.

51. The method as claimed in Claim 49, further comprising manually editing or entering a loan disbursement time series to manually design individual repayment amounts for each installment and ensuring that, in any given month, more than that month's loan utilization cannot be repaid.

52. The method as claimed in Claim 49, further comprising giving access to all project currencies.

53. The method as claimed in Claim 49, further comprising automatically building inventories.

54. The method as claimed in Claim 49, further comprising allowing cash flow risks to be shared with a supplier.

55. The method as claimed in Claim 49, further comprising allowing selection of a time needed to produce one output unit.

56. The method as claimed in Claim 49, further comprising creating a cash flow income statement and a balance sheet which accounts for output variations including maintenance shutdowns.

57. The method as claimed in Claim 49, further comprising allowing sale of output or portions thereof on a cost-plus basis.

58. The method as claimed in Claim 49, further comprising checking dynamic impact of changes in key variables on limited recourse reserve availability.

59. The method as claimed in Claim 49, further comprising providing a monthly equity subscription plan by one of accessing total time series for monthly entries and month-to-month.

60. The method as claimed in Claim 49, further comprising inputting multiple variables per product.

61. The method as claimed in Claim 49, further comprising inputting different types of sales contracts per product.

62. The method as claimed in Claim 49, further comprising break-even testing a sales contract.

63. The method as claimed in Claim 49, further including automatically generating loan repayment time series while permitting, in the case of equal installments, use of free cash flow to prepay loans.

64. The method as claimed in Claim 49, further comprising automatically generating debt service reserves accounts including monthly step ups.

65. The method as claimed in Claim 49, further comprising automatically depreciating capital expenditure for buildings, equipment, pre-production costs and capitalized interest during construction over a number of years inputted by user.

66. The method as claimed in Claim 49, further comprising automatically generating reinvestment time series for capital expenditure categories buildings and equipment.

67. The method as claimed in Claim 49, further comprising automatically generating maintenance time series for capital expenditure categories site, buildings and equipment.

68. The method as claimed in Claim 49, further comprising automatically generating an output time series based upon capacity used including automatic creation of linear, steep or flat learning curves and allowing for manually editing the time series of the capacity used.

69. The method as claimed in Claim 49, further comprising, in case of accessing total time series month-to-month, informing a user after each monthly entry about a resulting equity ratio, required and actual balance of aggregate debt service reserve account, cash flow after aggregate debt service reserve account and additional shareholder investments in the respective month.

70. The method as claimed in Claim 49, further comprising generating automatically and editing manually property tax and corporate tax rate time series.

71. The method as claimed in Claim 49, further comprising automatically performing sensitivity testing on capital expenditure contracts, exchange rates, input costs, interest rates and start up delays.

72. The method as claimed in Claim 49, further comprising validating user entries made on entry forms on screen while a user is inputting entries, thereby ensuring immediate feedback to the user concerning permitted data range and clearing respective entry field even before the user presses an enter button should entry be out of range or of wrong data type and thus preventing lengthy error messages related to numerous entry fields once the user presses the enter button.

73. The method as claimed in Claim 49, further comprising permitting user to select form of presentation of financial statements as monthly, quarterly, half-yearly or yearly.

74. The method as claimed in Claim 49, further comprising permitting user to change start up of operation month causing automatic updating of capacity use time series including learning curves with user having to revisit capacity use time series only in case user has manually edited capacity use time series.

75. The computer program as claimed in Claim 1, wherein means is provided to validate user entries on entry forms on screen while user is inputting entries, thereby ensuring immediate feedback to user informing user about permitted data range and clearing respective entry field even before user presses enter button should entry be out of range or of wrong data type thus preventing lengthy error messages related to numerous entry fields once user presses enter button.

76. The computer program as claimed in Claim 1, further comprising means for inputting and selectively changing project start month and year, fiscal year month and year and month of start up of operations.

77. The computer program as claimed in Claim 76, wherein said inputting and changing means includes permitting user to select form of presentation of financial statements as monthly, quarterly, half-yearly or yearly.

78. The computer program as claimed in Claim 76, wherein said inputting and changing means includes permitting a user to change start up of operations month, causing automatic updating of capacity use series including learning curves with the user having to revisit capacity use time series only in case the user has manually edited capacity use time series, to the extent the user's intentions cannot be inferred.

[illegible]